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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,617

10/24/2003

Tung-Sheng Cheng

17956-US-PA

7208

31561

7590

04/21/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER

ROSSI, JESSICA

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,617

Applicant(s)

CHENG ET AL.

Examiner

Jessica L. Rossi

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/15/06, Amendment.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,5 and 9-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment/Election

1. This action is in response to the amendment dated 2/15/06. Claims 2-3 and 6-8 were cancelled. Claims 1, 4-5 and 9-20 are pending but claims 11-20 remain withdrawn without traverse, as set forth by Applicant on p. 9 of the remarks filed 2/15/06.
2. It is noted that amended claim 1 is a combination restating all the limitations from original claims 1-2, with the additional limitation of the vacuum pressure being lower than one atmosphere (support found on 9, line 2 of the spec). Therefore, the 102 rejections for original claim 1, as set forth in paragraphs 12-13 of the previous action, have been withdrawn. Furthermore, the 103 rejections for original claim 2, as set forth in paragraphs 15-17 of the previous action, have also been withdrawn because of the discovery of better prior art upon further searching.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1, 4-5 and 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, it recites the limitation "the pressing mechanism" in line 5. There is insufficient antecedent basis for this limitation in the claim. It is suggested to change "the pressing mechanism" to --a pressing mechanism-- in line 5 and then change "a pressing mechanism" to --the pressing mechanism-- in line 13.

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Also regarding claim 1, it recites the limitation "the second substrate" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim. It appears Applicant forgot to include the preamble from original claim 2 when amending claim 1 to include these limitations; therefore, it is suggested to insert --which is used to encapsulate a first substrate and a second substrate-- after "apparatus" in line 1 of claim 1.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 4-5 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art in the specification of the present application in view of the collective teachings of Brosig et al. (US 5106441), Hashizume et al. (US 2006/0027318), Lee et al. (US 7022199) and Lee et al. (US 2003/0178133).

With respect to claim 1, the Admitted Prior Art teaches a FPD encapsulation apparatus comprising a chamber having an airtight space wherein the chamber comprises a housing 21, which connects to a pressing mechanism 23, wherein a second substrate 33 is provided in the housing and attached to the pressing mechanism; a curing device 22 disposed next to the housing 21 and having a supporting portion 221 to support a first substrate 31, wherein the curing device and the housing form an operating space; and the pressing mechanism 23 disposed within the chamber, wherein the pressing mechanism is operated in the operating space (Figures 2A-2E; section [0004]). It is unclear as to whether the Admitted Prior Art teaches the chamber comprising a vacuum device adapted for decreasing the pressure of the operating space down to lower than 1 atmosphere.

It is known in the art to form a FPD by bonding first and second substrates inside a FPD encapsulation apparatus that comprises a chamber having an airtight space, wherein the chamber comprises a housing that connects to a pressing mechanism disposed within the chamber and a supporting portion disposed next to the housing for supporting the first substrate while the pressing mechanism lowers the second substrate into contact with the first substrate, and wherein the chamber is evacuated by a vacuum device to a pressure lower than 1 atmosphere during bonding of the substrates, as taught by the collective teachings of Brosig (Figure 1; abstract; column 2, line 65 – column 4, line 55), Hashizume (Figure 11; sections [0001, 0030, 0075-0080, 0082]), Lee '199 (Figures 2 and 3B-3G; column 1, lines 25-28; column 5, lines 55-56; column 7, lines 10-12; column 9, lines 34-36) and Lee '133 (abstract; Figures 3-5; sections [0003, 0031-0032, 0054]).

Therefore, it would have been obvious to one having ordinary skill in the art to include a vacuum device in the chamber of the Admitted Prior Art so that the operating space can be evacuated to a pressure lower than one atmosphere because such is known in the FPD encapsulation apparatus art, as taught by the collective teachings of Brosig, Hashizume, Lee '199 and Lee '133, where such an environment allows for uniform and controlled pressure during bonding of the substrates which prevents the formation of air bubbles in the laminate.

Regarding claim 4, the Admitted Prior art in view of the collective teachings teaches such (Hashizume – section [0030]; Lee '133 – section [0032]).

Regarding claim 5, the Admitted Prior Art teaches such (section [0006]).

Regarding claims 9-10, the Admitted Prior Art in view of the collective teachings teaches such (Hashizume – section [0080]; Lee '133 – section [0060]).

Response to Arguments

7. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **571-272-1223**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard D. Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**JESSICA ROSSI
PRIMARY EXAMINER**

Jessica Rossi